REMARKS/ARGUMENTS

Claims 1-20 remain in this application. Claims 1, 5, 6, and 13 are amended, and claims 2 and 10 are cancelled without prejudice. No new matter is added by the amendments to the claims.

CLAIM REJECTION UNDER 35 U.S.C. 102(b)

At page 2 of this Office Action, claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Hargrove, U.S. Patent No. 5,3781,847 ("Hargrove"). Applicants submit that claim 1 is not anticipated by Hargrove because Hargrove does not disclose all of the elements of Applicants' claimed invention, and claim 2 is not anticipated by Hargrove because claim 2 is cancelled without prejudice.

Hargrove discloses a system for a user to specify an arrangement of windows on a display of a computer system. For example, the display may present a grid having a window arrangement depending on corresponding grid lines based on user inputted rows and columns (Col. 3, lines 13-19). The user may change configuration of the window arrangement by selecting, e.g., clicking with cursor and mouse, a grid line segment to remove the same (Col. 3, lines 23-39). If the user reclicks at approximately where the line segment was positioned, the corresponding line segment is redisplayed (Col. 3, lines 39-42).

Applicants' invention is directed to a display system providing an integrated graphical user interface facilitating interactive and dynamic display of aircraft data. In one embodiment, a user input system, e.g., select button or menu button, facilitates transfer of data from the user to other components of the display system (see Applicants' Specification at page 3, lines 16-33). The user may depress the menu button to cause the display to present a modification mechanism (see Applicants' Specification at page 4, lines 3-8). The display is graphically subdivided into panels

that may be subject to predetermined displays rules to control the display system (see Applicants' Specification at page 5, lines 3-18). In one example, the panels cannot be moved by click-and-drag operations, cannot overlap, and cannot be resized except in accordance with a limited selection of pre-assigned sizes of the panels (see Applicants' Specification at page 5, lines 19-28). The modification mechanism allows the user to expand/contract the size of the various panels (see Applicants' Specification at page 7, lines1-33). By adjusting the information on the display in accordance with the predetermined display rules and limited selection of pre-assigned sizes of panels, the user may view desired information according to the user's current needs and interests while minimizing heads-down time and interpretation difficulties, particularly associated with avionics displays.

Claim 1 recites a display where "at least one of the panels is selectively configurable to have a size corresponding to a one of a limited set of non-user-defined sizes [emphasis added]". In contrast with claim 1, Hargrove teaches a different approach to resizing displays by focusing on removal or addition of line segments. The grid components taught by Hargrove do not provide a selection from non-user-defined set of sizes because the rows and columns are variable according to user selection and are thus user-defined. Hargrove does not teach or suggest a selectively configurable panels having a size selected from a non-user-defined set of sizes.

Although the background discussion of Hargrove discloses a five window arrangement, this is accomplished by a user individually sizing and moving each window (see Col. 1, lines 32-39) or, alternatively, a windows arrangement in the context that "the windows are only automatically arranged in certain predefined arrangements" (see Col. 1, lines 39-48). In other words, Hargrove teaches an arrangement of windows and does not address each window's characteristics. As an

example of the limitations of the predefined window arrangements, Hargrove teaches that the user must manually size and move each window to obtain a four window arrangement (see Col. 1, lines 57-65). Manual manipulation of each window is clearly contrary to the general teaching of avionics display and to Applicants' invention. At best, Hargrove discloses, in the background discussion, jumping from one predefined window arrangement to another predefined window arrangement, however the other predefined window arrangements are not disclosed nor is the manner of selecting the same. These operations disclosed in Hargrove do not disclose panels of a display that are selectively configurable "to have a size corresponding to a defined selection of sizes" as recited in claim 1.

Because of the foregoing discussion regarding the patentability of claim 1 and because claim 2 depends from claim 1, Applicants respectfully submit that Hargrove, either alone or in combination with the cited references, does not anticipate or obviate claim 1.

CLAIM REJECTION UNDER 35 USC §103(a)

At page 4 of this Office Action, claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hargrove in view of Microsoft® Excel 2000 (Copyright© 1985-1999) ("Excel 2000"). Excel 2000 is cited for disclosing "modification interface for changing at least one of the selected display content and the size of the panel." Applicants submit that claims 3-5 are not obviated by Hargrove in view of Excel 2000 because none of the cited references, either alone or in combination, disclose or suggest all of the elements of Applicants' invention.

Excel 2000 discloses resizing and moving worksheets by clicking-and-dragging to provide user customized worksheets. However, like Hargrove, Excel 2000 does not disclose an avionics display where "at least one of the panels is selectively configurable to have a size corresponding to

one of a limited set of non-user-defined sizes" as recited in claim 1. Nothing in Excel 2000 teaches or suggest panels that are selectively configurable according to a limited set of non-user-defined sizes. A mouse taught by Excel 2000 used to control a cursor, to resize and move the worksheets by clicking-and-dragging, is not a modification interface recited in claim 3 because Excel 2000 does not teach that the mouse changes the size of the panel from among a limited set of sizes. Additionally, Excel 2000 does not teach all of the limited selection of sizes recited in claim 1.

Further, Applicants submit that that Excel 2000 is not related to avionics displays and teaches contrary to the problems faced by avionics displays and Applicants' invention, as previously touched upon hereinabove. For example, the clicking-and-dragging to manually size and move worksheets disclosed by Excel 2000 is contrary to the teaching of Applicants' invention and to avionics displays in general because the additional customization provided by manually resizing and moving the worksheets taught by Excel 2000 would further complicate use of an avionics display and is generally undesirable. Even if the teaching of Excel 2000 were combined with the teaching of Hargrove, the resulting combination would teach against avionics displays in general and Applicants' invention.

From the foregoing discussion regarding the patentability of claim 1 and because claims 3-5 depend from claim 1 or an intermediate claim depending therefrom, Applicants submit that claims 3-5 are patentably distinguished from Hargrove and Excel 2000, either alone or in combination.

At page 6 of this Office Action, claims 6, 10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller et al., U.S. Patent No. 6,072,473 ("Muller et al."), in view of Briffe et al., U.S. Patent No. 6,112,141 ("Briffe et al."). Applicants submit that claims 6 and 13 are not obviated by Muller et al. in view of Briffe et al. because none of the cited references, either alone or

in combination, disclose or suggest all of the elements of Applicants' invention. Applicants further submit that claim 10 is not obviated by the cited references because claim 10 is cancelled without prejudice.

Muller et al. disclose an instrument panel having multipurpose control display units with display screens that enable dialogue between a flight management system and a pilot. The displays have sensitive surfaces (Col. 4, lines 28-43). The pilot may select different display element selection modes by touching an area of the sensitive surface and validating the selection (Col. 4, line 54 – Col. 5, line 14). Each display selection mode has a sensitive surface divided into areas corresponding with the display elements within the cockpit or display sub-elements inside a particular displayed element (Col. 4, lines 60-65). For example, different sensitive surface areas are allocated in accordance with different display element arrangements.

Briffe et al. disclose an aircraft display and control system having cursor control devices for receiving pilot-entered commands and display devices generating moveable cursors corresponding to each cursor control device. The cursor may highlight navigation aid indicators that are stored to a database to create a flight plan in memory (Col. 3, lines 20-30). Briffe et al. further disclose display of a menu with columns where maps and charts occupy 5/6 of a screen (Col. 16, lines 43-49), and a vertical profile occupies 1/4 a screen that can be automatically compressed to 1/6 (Col. 16, lines 43-49, and Col. 18, lines 39-44). Applicants submit that these sizes are detailed in Briffe et al. to indicate that a relatively clear view is provided to the maps and charts as supported by the compressibility of the vertical profile.

Claim 6 recites a cockpit display system having a processor that provides "a plurality of displays to the plurality of monitors, wherein at least one of the panels is selectively configurable to

have a size corresponding to one of a limited set of non-user-defined sizes, and wherein the limited set of sizes is substantially 1/6, 1/3, 1/2, 2/3 and 3/3 of the display [emphasis added]". Muller et al. and Briffe et al., either alone or in combination, do not disclose panels that are selectively configurable to a size selected from a limited set of non-user-defined sizes. At best, Briffe et al. disclose a vertical profile occupying 1/4 screen that can automatically be compressed to 1/6. This compression is not the same as selective configuration from a non-user-defined set of sizes. Further, Muller et al. and Briffe et al., either alone or in combination, do not disclose a limited set of non-user-defined display sizes of 1/6, 1/3, 1/2, 2/3 and 3/3 of the display.

Applicants submit that it is inappropriate to combine Muller et al. with Briffe et al. because to do so is contrary to the teachings of both. Both Muller et al. and Briffe et al. are directed to display technology used in avionics. Muller et al. teaches that "[i]ts aim is more particularly, though not exclusively, to produce an ergonomic and easy-to-use communications instrument which can also contribute to reducing the complexity" (see Col. 1, lines 14-18). In fact, Muller et al. teach that use of a cursor that is displaced by mouse, keyboard entry, or other manipulator "are not very suitable in the case of systems with a large number of operating modes and, in particular, in the case where communication is required with several processors each equipped with respective visualizing means as found in the instrument panel taught by Muller et al. (see Col. 1, lines 21-65). Briffe et al. teach an aircraft flight management system "which permit simplified flight planning and navigation procedures, reduced cost, reduce pilot workload, and improved safety" (see Col. 2, lines 59-63). However, in contrast with the teaching of Muller et al., Briffe et al. teach to use cursor control devices that independently control respective moveable displayed cursors (see Col. 10, lines 33-47).

Combining the teaching of Briffe et al. with Muller et al. would further complicate any resulting display system which is contrary to the teachings of both.

Applicants submit that claim 6 is patentably distinguished from Muller et al. and Briffe et al. because neither disclose selectively configurable displays from a non-user-ddefined set of display sizes and because there is no motivation to combine the teaching of Briffe et al. with the teaching of Muller et al. From the foregoing discussion regarding the patentability of claim 6 and because claim 13 depends from claim 6, Applicants submit that claim 13 is likewise patentably distinguished from the combination of Muller et al. and Briffe et al.

At page 9 of this Office Action, claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller et al., U.S. Patent No. 6,072,473 ("Muller et al."), in view of Briffe et al., U.S. Patent No. 6,112,141 ("Briffe et al."), and further in view of Palmer et al., U.S. Patent Application Publication No. 2003/0025719 ("Palmer et al."). Palmer et al. are cited for disclosing "a modification interface for changing at least one of the selected display content and the size of the panel". From the foregoing discussion regarding the patentability of claim 6 and because claims 11 and 12 depend from claim 6 or an intermediate claim depending therefrom, Applicants submit that claims 11 and 12 are likewise patentably distinguished from Muller et al., Briffe et al., and Palmer et al., either alone or in combination.

Applicants' further submit that it is inappropriate to combine Palmer et al. with Muller et al. for similar reasons set forth hereinabove regarding the inappropriateness of combining Briffe et al. with Muller et al. In particular, Palmer et al. teach using a cursor (see Fig.7) to activate graphical user interfaces. As previously mentioned, Muller et al. does not use mouse activated cursors or

keyboard activated cursors because of an objective to simplify tasks. Palmer et al. teaches contrary to the teaching of Muller et al.

At page 11 of this Office Action, claims 7-8, 14, 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller et al., U.S. Patent No. 6,072,473 ("Muller et al."), in view of Briffe et al., U.S. Patent No. 6,112,141 ("Briffe et al."), as applied to claims 6, 10, and 13 above, and further in view of Factor, U.S. Patent No. 6,281,810 ("Factor"). Factor is cited for disclosing a "processor configured to provide the second set of information to the first monitor if the second monitor fails". From the foregoing discussion regarding the patentability of claim 6 and because claims 7 and 8 depend from claim 6 or an intermediate claim depending therefrom, Applicants submit that claims 7 and 8 are likewise patentably distinguished from Muller et al., Briffe et al., and Factor, either alone or in combination.

Factor discloses an avionics display for aircraft instruments having a glass cockpit instrument replacing a number of separate aircraft instruments (Col. 4, lines 17-24). The instrument is a box with a front screen for receiving images from optical projectors (Col. 4, lines 25-52). Each projector has a separate operating computer capable of illuminating the entire screen, and normal operation involves each projector/computer combination to provide a portion of the whole display (Col. 5, lines 21-45). The computers are cross-connected "for the limited purpose of determining whether one illumination device (or electronic operation of the other computer) has failed" (Col. 5, lines 11-20).

Applicants submit that the combination of Factor with Muller et al. and Briffe et al. does not result in Applicants' invention. Claim 14 recites a cockpit display system having "a processor communicating with the plurality of monitors, wherein the processor provides a first set of

information to a first monitor and a second set of information to a second monitor, and wherein the processor is configured to provide the second set of information to the first monitor if the second monitor fails." The combination of the cited references does not disclose a processor communicating with at least a first monitor and a second monitor.

Whether Factor discloses separate monitors is made unclear because the separate processors taught by Factor illuminate a single screen. Applicants submit that a significant difference exists between having redundant projection onto a single screen, as taught by Factor, and providing "the second set of information to the first monitor if the second monitor fails". Factor teaches two separate processors that are only cross-connected for alerting purposes (see id.), and Muller et al. teach different screens having respective processors (see Muller et al., Col. 4, lines 10-13). The hypothetical combination of Factor with Muller et al. logically results in a plurality of processors controlling respective displays, and at best suggests a plurality of processors controlling one display. Neither of these possible resulting combinations is a processor communicating with a first monitor and a second monitor. Applicants further submit that no motivation is provided to further modify either of those hypothetical resulting combinations to arrive at a processor as recited in claim 14 because redundancy is already provided by Factor.

Applicants submit that claim 14 is patentably distinguished from the combination of Muller et al., Briffe et al., and Factor because the combination does not disclose or suggest the processor recited in claim 14. From the foregoing discussion regarding the patentability of claims 6 and 14 and because claims 17-19 depend from claim 14, Applicants submit that claims 17-19 are likewise patentably distinguished from the combination of Muller et al., Briffe et al. and Factor.

At page 13 of this Office Action, claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller et al., U.S. Patent No. 6,072,473 ("Muller et al."), in view of Briffe et al., U.S. Patent No. 6,112,141 ("Briffe et al."), as applied to claims 6, 10, and 13 above, and further in view of Palmer et al., U.S. Patent Application Publication No. 2003/0025719 ("Palmer et al."). From the foregoing discussion regarding the patentability of claims 6 and 14 and because claims 15 and 16 depend from claim 14 or an intermediate claim depending therefrom, Applicants submit that claims 15 and 16 are likewise patentably distinguished from Muller et al., Briffe et al., and Palmer et al., either alone or in combination.

At page 13 of this Office Action, claims 9 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller et al., U.S. Patent No. 6,072,473 ("Muller et al."), in view of Briffe et al., U.S. Patent No. 6,112,141 ("Briffe et al."), as applied to claims 6, 10, and 13 above, and further in view of Nakajima et al., U.S. Patent Application Publication No. 2001/0055029 ("Nakajima et al."). Nakajima et al. are cited for disclosing "the first set of information corresponds to a first priority, and wherein the processor is configured to provide the second set of information to the first monitor only if the second priority is higher than the first priority."

From the foregoing discussion regarding the patentability of claim 6 and because claim 9 depends from and intermediate claim depending from claim 6, Applicants submit that claim 9 is likewise patentably distinguished from Muller et al., Briffe et al., and Nakajima et al., either alone or in combination. From the foregoing discussion regarding the patentability of claim 14 and because claim 20 depends from claim 14, Applicants submit that claim 20 is likewise patentably distinguished from Muller et al., Briffe et al., and Palmer et al., either alone or in combination.

PRIOR ART NOT RELIED UPON

The prior art made of record and not relied upon in this Office Action has been considered by Applicants and determined not to be pertinent, particularly in light of the foregoing differences between the claimed invention and the cited references.

CONCLUSION

In view of Applicants' remarks, it is respectfully submitted that Examiner's rejections under 35 USC §§102 and 103 have been overcome. Accordingly, Applicants respectfully submit that the subject application is in condition for allowance, and such allowance is therefore earnestly requested. Should the Examiner have any questions or wish to further discuss this application, Applicants request that the Examiner contact the Applicants' attorneys at 480-385-5060.

If for some reason Applicants have not requested a sufficient extension and/or have not paid a sufficient fee for this response and/or for the extension necessary to prevent abandonment on this application, please consider this as a request for an extension for the required time period and/or authorization to charge Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

INGRASSIA FISHER & LORENZ, P.C.

Dated: March 31, 2004

By: _____
Andrew Y. Pang
Reg. No. 40.1144
(480) 385-5060